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Method or Madness

Teaching methods are in danger of becoming a crutch. The major part of teacher education seems to be tending toward a search for a magic wand of method which would eliminate the necessity for scholarship and specialized ardor in the requisite pedagogical equipment. We have sloughed off the evangelist and left the alchemist. Or perhaps there is fervor enough in our teachers, but it is misdirected into the faith that meticulous subject preparation and consuming subject interest are subordinate to standardized teaching procedures.

If there is one dominant strain in the short genealogy of the new science of modern education it is probably the belief that superior educational practice cuts across subject lines and attempts to show the inter-relationship of all forms of human knowledge. This is a high and proud objective, certainly, and one deserving of all the energy expended on its quest, but in the pursuit of the ideal we have often lost sight of the fact that a falling off in the integrity of the chase can leave mained and unfit practices to accumulate on the high road to our goal.

Thus, the concept of an interrelated curriculum finds methodology a boon companion. The dilettante needs no impetus of zeal in the anthologic sweep of the modern school. He need have no abiding interest in anything save the infallibility of the method machinery. He relies to a stultefying degree on physical props: posters, motion pictures, book jackets, story illustration. One is tempted to surmise that he fills his classroom with such matter to divert attention from the emptiness of his head. Even the teaching of appreciation courses, which require inspirational ardor and eloquence of the good teacher, are plotted in carefully measured steps. The teacher is not encouraged to improvise. His mind is not allowed to grow—its expansion might break the web.

A method of putting across an idea to a student presupposes the existence of the idea in the mind of the instructor, and the value of the teaching procedure is in direct proportion to the richness and abundance of the teacher's familiarity with his subject.

Teaching methods are the handmaidens of specific knowledges; they are never the knowledge itself. The appalling emptiness of interest and cynical assurance which a teacher-education program unmindful of its subordinate position breeds in the future custodians of America's minds is directly in line with the shallow thinking of our time. Such a practice is probably indigenous to the nature of its surrounding civilization, but, what is immensely more important, it is contributing a great amount to the preservation of our national heritage of assembly-line mentality.

This is by no means, an attempt to repudiate research toward better means of stimulating the minds of school children, but it is a reminder that all such accomplishment springs basically from the understanding and enthusiasm the teacher has for the subject he is teaching. The concept of interrelationship of subject matter is not in itself an erroneous one, but it is fallacious and ineffective when it is not founded on the recognition of the higher integrity of the individual subject. This is the rock against which our high-purposed unit plans are dashed. Unless a teacher were as multi-capable as a Leonardo he could not hope to carry on his job with the complete immersion in his work which is indispensable to good teaching.

The *Teachers College Journal* seeks to present competent discussions of professional problems in education, and toward this end restricts its contributing personnel to those of training and experience in the field. The *Journal* does not engage in republication practice, in the belief that previously published material, however creditable, has already been made available to the professional public through its original publication.

Manuscripts concerned with controversial issues are welcomed, with the express understanding that all such issues are published without editorial bias or discrimination.

Articles are presented on the authority of their writers, and do not necessarily commit the *Journal* to points of view so expressed. At all times, the *Journal* reserves the right to refuse publication if in the opinion of the Editorial Board an author has violated standards of professional ethics or journalistic presentation.

Evaluating The Effectiveness of an Integrated Ninth Grade Curriculum

J. WAYNE WRIGHTSTONE

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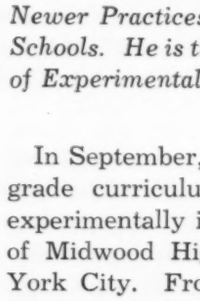
Board of Education of the City of New York

Dr. Wrightstone is the author of several significant educational assessments: Appraisal of Experimental High School Practices, Appraisal of New Elementary School Practices, and Appraisal of Newer Practices in Selected Public Schools. He is the Editor of Journal of Experimental Education.

In September, 1944, a new ninth-grade curriculum was introduced experimentally into selected classes of Midwood High School in New York City. From the initiation of this basic revision of the high school curriculum, the guiding and advisory committee insisted upon the postponement of subject matter fields in the interests of a core curriculum. Thus, the core, or integrated curriculum, was freed from the regular subject matter requirements and period organization and was devoted to meeting the interests and needs of adolescent children in the ninth year.



The term core curriculum as used by the committee signifies a curriculum providing a common body of learning experiences basic for all pupils. In this core a problem of living is the center of instruction. An essential element of the plan is the assignment of one teacher to a class group for a long core period each day; this brings guidance and instruction together and reduces the necessity of guidance as a separate function. Constituting from one-half to two-thirds of the school day in the first year, the core diminishes progressively in later years as the pupil finds the need for specializing in particular subject fields.

At the beginning the committee confined itself to work on the ninth year, the core of which is "Personal Problems and Relationships." This broad problem of living was broken down into the following instructional units, the order of which is not significant: "Orientation to School"; "My Physical Health"; "My Mental Health"; "Myself and the Universe"; "Leisure Time Activities"; "My Allowances and Earnings"; "My Friends"; "My Career"; "My Sex Interests"; "My Persoanl Appearance"; "My Relations with My Family."

In the working out of the individual source unit the most practical framework was found to be similar in basic design to that illustrated by the unit "My Career," which is offered as a sample source unit. The complete unit cannot be reproduced here because it is too long for a digest. It is hoped, however, that the synopsis will serve to give some understanding of the intent of the core curriculum and its underlying philosophy.

Synopsis of the Unit "My Career"

There are listed, first, the typical student concerns as foreseen by the teachers, such as: What do I want to do for a living? What kinds of jobs are now available? How have current conditions affected the job I am interested in? Why are people fired? and so forth. In actual practice this list may need considerable modification; the concerns of one group of pupils at a particular time will not be identical with those of another group at another time or even at the same time. After the typical student concerns have been identified, a second step is to list the activities in which the students might engage, either individually or in groups, in order to satisfy their felt needs. As examples, the following may be mentioned: Reports by pupils who have achieved success in some job; interviews with business men and guidance counsellors; preparing an advertisement which will give to high school students information about jobs; making a chart showing the number of persons engaged in various industries; dramatizing all stages of getting a job, etc.

A third step is to prepare a tentative list of typical knowledges, skills and understandings that can be developed through such activities. From a list of about forty, the following have been chosen for illustrative purposes: Knowledge of standards of conduct and grooming; understanding of the place of small job as essential to community or country; skill in making charts and graphs; skill in reading and answering advertisements, and so forth.

A fourth step in the typical unit is to suggest three or four procedures for beginning the unit. This includes a statement of the background of information with which the teacher should provide himself, and lastly a list of materials, including books.

The unit outlined must be regarded rather as a report on progress of a continuing preparation for the experiment than as a completed curriculum.

Evaluation of the Experiment

In order to evaluate the experi-

ment, the committee was asked to designate the objectives of the curriculum. The major objectives were then classified into the following categories: (1) Skills and abilities in reading comprehension, (2) Work and study skills, (3) Abilities and skills involved in critical thinking, (4) Growth in civic attitudes, (5) Development of interests, (6) Functional concepts and information, and (7) Personal-social development.

The evaluation data in this report are for the school year 1944-45, which was the first year of the experiment. In this year the children remained with the same teacher throughout the school day, except for instruction in mathematics, physical education, and music. Three classes of approximately 120 pupils were involved. In order to evaluate the experimental curriculum, each of these pupils was matched with a pupil who was attending a conventional-type curriculum class in the school. The criteria for matching the pupils were sex, intelligence, chronological age, reading grade, arithmetic grade and socio-economic background. Because of organizational difficulties in embarking upon the experiment and delay in planning the evaluation, the initial measurements of the experimental and control pupils did not take place until January, 1945. The final measurements were made in June, 1945.

The plan for evaluation of growth in skills, abilities, concepts and attitudes was to test these two groups of pupils before and after a period of time and to compare gains. Any difference in gains might be attributed to the differential, the integrated, or core curriculum.

The testing schedule was as follows:

	January 1945	June 1945
Co-operative English Test Cl, Reading Comprehension	Form R	Form S
Co-operative Test of Social Studies Abilities	Form Q	Form Q
Iowa Every-Pupil Test of Basic Skills —Test B: Work Study Skills.....	Form L	Form M
Co-operative Mathematics Test for Grades 7, 8, 9.....	Form Q	Form RO
Wrightstone Scale of Civic Beliefs.....	Form A	Form B

A brief description of these tests is provided for a clearer understanding of the abilities, skills and attitudes measured by the tests.

The *Co-operative English Test Cl, Reading Comprehension,* is constructed on the assumption that reading is a thinking process. This test requires considerable reasoning on the part of the student. Three sub-test scores are obtained —namely, speed of comprehension, level of comprehension and vocabulary. A total score for reading comprehension is also obtained.

The *Co-operative Test of Social Studies Abilities* measures the pupil's ability to obtain facts in (Part I), organize facts in (Part II), interpret facts in (Part III), and apply generalizations in (Part IV) in social studies materials. In order to reduce the testing time, Part II of the test was not administered. Part I includes the interpretation of graphs, maps, use of an index, indication of best sources of information, etc. Part III requires the pupil to indicate whether or not certain conclusions and inferences can be drawn from given passages dealing with social studies topics. Part IV involves application of principles to new situations.

The *Iowa Every-Pupil Test of Basic Skills—Work Study Skills* measures skills in map reading in (Part I) which was not administered because it was not applicable in this experiment, use of references (Part II), use of index (Part III), use of dictionary (Part IV), and reading graphs, charts and tables (Part V). The test battery yields separate scores on each of these parts and a total score for work-study skills.

The *Co-operative Mathematics Test for Grades 7, 8 and 9* measures mathematical skills, mathematical facts, terms and concepts, mathematical applications and appreciation of the nature and value of mathematics. It deals with numbers, fundamental processes, and practical algebraic and geometric concepts and processes, and practical problems in making purchases, taxation, etc.

The *Wrightstone Scale of Civic Beliefs* measures liberalism-conservatism on civic issues. The pupil is required to indicate his agreement or disagreement with a series of statements dealing with racial attitudes, international attitudes, national political attitudes and attitudes toward national achievements and ideals.

For the 86 pairs of matched pupils, a summary of the differences in gains between the initial and final tests for the experimental and control groups is given in the table below. The level of confidence for the reliability of the differences is given also.

In general, the experimental compared with the conventional curriculum pupils gained more in the abilities and skills measured by these tests. The two instances in which the control group showed larger gains were in Mathematics (Co-operative Mathematics Test) and in obtaining facts (Co-operative Test of Social Abilities, Part I), but neither of these differences was statistically significant. The apparent possible superiority of the control group in obtaining facts as revealed by the *Co-operative Test of Social Studies* moreover is not borne out by the *Iowa Test of Work-Study Skills.* The latter is a longer and more reliable measure of study skills in obtaining facts and it seems reasonable to place greater weight on the results of this test than on a single subtest of the former.

On the *Iowa Test of Work-Study Skills* the gain for the experimental group was greater than the gain for the control group (less than 1% of random samples would yield a dif-

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The Technique of Developing Reading Materials Based on The Needs of Children

MAURICE F. SEAY
Director of the Bureau of School Service and Dean of the University of Kentucky

Dr. Seay has been Dean of the University of Kentucky since 1946. *He was connected with the Tennessee Valley Authority for five years as associate in the Educational Research Division and as Chief of the Training Division. He is the author of several books on educational research and policy.*

The Sloan Experiment in Kentucky, centered at the Bureau of School Service, University of Kentucky, began in 1939. The purpose of the experiment is to improve living conditions in selected communities through education. The Bureau staff decided to emphasize an economic necessity, food. Emphasis upon even one economic need, in schools which had previously given consideration to none, would direct attention to other needs. Dietary deficiencies were obvious and widespread, and the approach toward correcting them seemed to lie principally in education.

An initial step in setting up the experiment was to analyze the content of textbooks used in the schools, as well as all available supplementary material. The analysis showed very little that would aid schools to build programs around the problem of adequate diet in communities of low economic level. The staff realized that it would be necessary to develop instructional materials about food.

The schools selected for the experiment had many needs other than that of teaching materials; they needed better equipment and housing, more supervision, higher salaries for teachers. But the staff desired an inexpensive and practical approach that could be used by other teacher-education institutions working with schools to improve living. The preparation of instructional materials at all grade levels seemed to be a direct way of influencing a generation of children in a short time. The staff, feeling that even first-grade children are interested in economic problems that affect them directly, decided to start with materials for the first grade and progress to higher grade levels as rapidly as possible. Another reason for the decision was the result of achievement tests, which showed that the older children in the experimental schools needed easier reading materials. Books prepared for the first grade could be used in any higher grade —and by the parents, many of whom had been neglected educationally. The vocabulary and ideas in subsequent books could be based upon the first series and developed with recognized patterns of learning.

In the preliminary study of teaching material, a convenient classification evolved: (1) textbooks, (2) special-purpose materials put out by government agencies, foundations, and other service groups, (3) school-made materials, and (4) the environment of the school, physical, social, and cultural. Materials prepared for the experiment would fall in the second category. Teachers and students who use such special-purpose materials generally make many materials of their own and are encouraged in finding instructional materials in their environment. They also gain more from textbooks, because they are better able to understand problems of world-wide and national scope when they understand their own community and region.

The experiment staff decided to use its own resources in preparing the materials. Since one of the functions of the Bureau of School Service is educational research, the staff members were qualified by experience and training to undertake this project. Furthermore, they had teaching experience, most of them in communities similar to the communities in which the experimental schools are located. Graduate students with writing ability were added to the staff, and from time to time people in such fields as nutrition and public health were employed to help measure the results of the experiment and to advise in the preparation of the materials.

A study was made of criteria suggested by authorities for the preparation and evaluation of readers for elementary grades. (Later, when the staff was ready to produce books at high-school level, a similar study was made.) These criteria, listed in the first progress report of the experiment,[1] dealt with the content, vocabulary, structure, illustrations, size and kind of print, margins, spacing, length of line and page, size of book, binding, cover, and paper. From this list the staff selected cri-

[1]Seay, Maurice F., and Clark, Harold F. *The School Curriculum and Economic Improvement.* Bulletin of the Bureau of School Service, Vol. XIII, No. 1 (September, 1940). Lexington: University of Kentucky,

teria which seemed applicable to the books they planned to write and to use the situations in which the books would be used. For example, they agreed that the content should be based upon the experiences and activities of the children who would use the books, the ideas should be within the children's understanding and appreciation, and the presentation should include surprise, action, liveliness, conversation, child humor, and animal life. The books should help children develop such basic reading abilities as comprehension, location of information, selection and evaluation of material, organization, speed, and memory. The staff decided to check the vocabulary by standard grade-placement lists, but to include words not on the lists if they were necessary to an explanation or if they were already familiar to the children. The selected criteria that determined the method of presenting subject matter and the make-up of the books are listed in the first progress report.

Next it was necessary to decide what phases of the broad general topic of diet should be emphasized. Two types of preliminary measurement in the schools and the communities were helpful in this decision. Surveys had already been made of the foods that were raised, stored or canned, and eaten by the families, and also of the lunches children brought to school. The surveys showed many dietary inadequacies. For example, few eggs were eaten although the region was well adapted to chicken raising. The children's school lunches in most cases consisted of food left over from breakfast or from supper the night before, and were not only inadequate but monotonous. There were few fall gardens. Although many families preserved some food for winter use, only seven different kinds were listed by as many as half. These were blackberries (which grow wild and in abundance), apples, beans, tomatoes, potatoes, cucumbers, and jelly. The families had, in proportion to other foods, too many cereal products, too much coffee, too much fried food and fat meat. But only half were serving milk, and butter was the only milk product served. Few had leafy green vegetables in the early spring other than wild greens, which were available at that time. Even in summer the variety was limited. The greatest deficiencies were found in the food group of lean meat, poultry, and fish and in the group which supplies liberal quantities of Vitamin C. Almost none of the families served food that contained all the essential elements.

These surveys of food practices showed obvious need for building new attitudes about food. The children needed to learn how to plan balanced and varied diets, how to grow food, can it, store it for the "hungry" months of winter and early spring, how to prepare it for table, and how to enjoy it.

The result of physical examinations of the children also helped in the selection of topics for the books. The examinations revealed evidences of malnutrition, some previous cases of rickets, many cases of adolescent goiter and of hookworm, and dental caries in almost every child. The members of the State Health Department and of the two county health units who cooperated in the phase of the experiment made valuable suggestions as to subject matter.

An advisory panel also suggested topics. This panel was made up of faculty members from the College of Education and the College of Agriculture and Home Economics, University of Kentucky, and others interested in education and economic improvement.

Officials in the two counties in which the schools are located gave ideas for the materials—county agents, home demonstration agents, public health personnel, the county superintendents, teachers. Two teachers from the experimental schools were appointed to the Bureau staff to advise on the actual conditions and the needs in the communities, and to explain the educational backgrounds of the children. Pupils, parents, and patrons also were consulted.

As the experiment progressed, the teachers and pupils who were using the materials requested new books on certain topics. Their comments on books already in circulation were a basis for revisions. At the end of each school year Bureau staff members held conferences with the teachers. These conferences were especially helpful in evaluating the books.

The information in the books is obtained from various sources—college textbooks, reference books, periodicals, bulletins of the United States Department of Agriculture, the University College of Agriculture and Home Economics, publications of agencies such as the TVA and of commercial organizations, and teachers and other experts. Facts are checked by authorities at the University and in state agencies. The materials are planned in staff conference, and all staff members contribute suggestions throughout the preparation. The books are carefully edited, and some are tried out in mimeographed form and revised before they are printed. So far, 39 books have been finished, and several others are being prepared.

The books are six by nine inches in size, and range from 13 to 93 pages in length. They are lithographed and bound in heavy paper. The many illustrations are the work of staff artists.

The first books to be written were eight readers for the first grade, called the *Food From Our Land* series. A story runs through the books, telling how Mary and Billy play and work on the farm. They help their parents plan a garden, plant and tend it, destroy insect pests, can and store the garden products. They eat balanced and nourishing meals, and they are happy on the

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Recruitment For The Basic Profession

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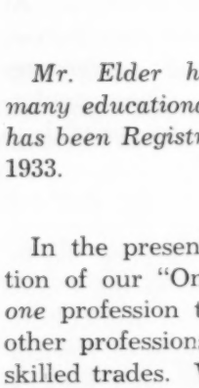
In the present complex civilization of our "One World" there is *one* profession that is *basic* to all other professions, occupations, and skilled trades. Without the profession of *teaching* there could be no physicians, dentists, lawyers, architects, engineers, agriculturists, statesmen, mechanics, accountants, industrialists, musicians, artists, or any other recognized occupation or profession; without teaching the civilization of the present era could not be maintained—not to mention the achievement of the ideals toward which the United Nations are striving. Without the general diffusion of knowledge through teaching world co-operation and world unity cannot be achieved and lasting peace will remain an ever-receding mirage.



Teaching is the one profession devoted to making each individual citizen able to do better whatever he chooses to do to earn a living and, at the same time, to serve more successfully and more effectively the remainder of mankind. Because of this basic relationship an *intelligent* society will pay whatever is necessary to recruit and to hold for the teaching profession some of the best minds and personalities of *each* generation. An intelligent society —no matter how mercenary its outlook and motives—will recognize the high positive correlation between the consumption of the products of industry and the average level of education attained by its citizens; it will purchase the services of its best minds for the profession upon which depends the individual success and social effectiveness of persons in all other walks of life.

In spite of the urgent need for the services of our best minds and personalities in the teaching profession it too frequently happens that young people possessing these attributes are denied even a college education for reasons beyond their control; and, as a corollary to this situation, they are denied the opportunity to make a genuine contribution either to the basic or to any other profession or occupation. In one fairly typical state, for example, approximately one-half of the ablest high school graduates of 1940 failed to enroll in any college while many of those with a very meager amount of potential ability entered institutions of higher learning.[1] Such a situation frequently results from insufficient and improper guidance from the high schools and upon such factors as place of residence, size of family, size of family income, socio-economic status, and family tradition with respect to college attendance. An intelligent society will provide better guidance and will find ways and means to aid superior college risks in financing college educations — thereby qualifying such promising persons for admission in adequate numbers not only to the teaching profession but also to other professions and occupations requiring trained minds and good personalities. This ideal will not be achieved by means of scholarship pittances of the size to which we have been accustomed up to the present time.

The ability of our nation to spend a hundred billion dollars annually for war for a period of several years is proof that it can afford to spend for an indefinite period at an annual rate of less than one billion dollars for the recruitment of outstanding young people for such a basic profession as teaching. In view of this demonstrated ability and the present crisis confronting education throughout our nation the following recommendations seem timely and feasible:

1. The attainment of the Master's degree from a fully accredited college or university should be made the minimum educational requirement for admission to the teaching profession. If this were true the profession would be more than an occupation for young women between high school graduation and marriage; not only would it retain more well prepared married women but it would become more and more a profession for men. ambitious and desirable persons are not apt to change readily from a profession or occupation the admission to which has required five years of reasonably difficult preparation beyond high school.

2. Through improved guidance and testing techniques in the secondary schools about 50,000 high school graduates — approximately

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[1]Davis, Horace Leonard. *The Utilization of Potential College Ability Found in June, 1940, Graduates of Kentucky High Schools.* Bureau of Schools Service, College of Education, University of Kentucky. Lexington, Kentucky. 1942. 101 pp.

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Emphasis on Different Aspects of "Effective Living" in Various Required Courses at the Chicago Teachers College

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Director of Personnel and Registrar
Chicago Teacher's College

(The following article is the text of a speech made at the University of Chicago Teacher Education Conference, October 21-22, 1946.)

As I examined the problem assigned to me it seemed that our various concepts concerning it would be in agreement with the possible exception of the word "effective".

Webster defines "effective" as "able to produce an effect, operative". That had not been the definition of "effective" that I had had in mind while reading the topic. I asked myself, had my interest in guidance come to the point of influencing as prosaic a thing as definitions long accepted on the authority of no one less than Webster? For my definition had not only included the ability to produce an effect, but had assumed that the effect be for the good of the individual and society.

I read on down to the synonyms. Finally, my eye lighted on the seventh and eighth of these, namely, "competent" and "adequate". They were more to my liking. To make sure that my definition of these agreed with Webster's, I turned a few more pages. Here is what I found.

"Competent — Answering to all requirements

Adequate — Equal to or sufficient for some "specific" requirement; fully sufficient"

Do you suppose that for our present purpose we might accept either of these? Personally, I lean toward the former, the one for competnt, namely, "answering to all requirements".

Would we be too astray if we said that effective living in its ideal state would indicate that one were living in a manner in whch one met all requrements?

In the reports sent by you to Dr. Gray it was frequently indicated that you considered the courses in your curricula in general education as emphasizing different aspects of effective living. I think that many of us subscribed to this to the extent that we had so completely taken them for granted that we had forgotten even to mention general education courses. Possibly, the most common examples of this type of course are the well known composition — or more recently called communication — literature, and general psychology courses.

Other courses in general education mentioned by you were those in humanities, social psychology, health, physical education, personal hygiene. Less frequently mentioned were courses in family living and social problems. President Snarr of Moorhead State Teachers College summarized the General Education program at his college in relation to effective living as "designed and operated on the assumption that the best preparation for specialization is the program best designed to fit the needs of students for effective living".

In addition to the general education courses there are the professional courses in psychology, namely, child development and educational psychology, which we also take for granted.

Shall we now consider our topic "Emphasis on Different Aspects of 'Effective Living' in Various Required Courses" as it pertains especially to the curriculum at the Chicago Teachers College.

Since the purpose of the College is to prepare teachers for the Elementary Schools of Chicago it cannot overlook the fact that the young people trained by the College will be with children during the children's formative years and that the responsibility of the College is to develop well-balanced individuals who will be useful citizens and leaders in their communities, so that in the elementary school classroom they in turn may help the children develop to their greatest capacity, whether these children be future leaders or followers in our society.

In order to be able to do this the Chicago Teachers College student should possess certain qualities or traits, among them mental and physical health. He should like and respect children, use subject matter as a tool rather than an end in itself, have ideals and goals that can be reached without detriment to his fellow-men, know the metropolitan area in which he is to teach, know something about human relations, keep abreast of what is going on, develop an avocation.

The basic aims of the College are (1) to develop well-balanced individuals who will be useful citizens and leaders in their communities, (2) to equip these individuals with fundamental tools for the profession they have chosen and (3) to instill into these young people the desire to continue their personal and professional growth.

The philosophies back of the treatment of the problems at Chicago Teachers College cannot be separated from those of the heads of

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Ear Training

CHARLES E. POSTON

Until his retirement in 1930 *Mr. Poston was director of music at Georgia State Womens College of the University of Georgia.*

From December, 1918, *until October,* 1919, *he was director of the Army Music School with the Army of Occupation on the Rhine at Coblenz, Germany.*

An instinctive process is one that is performed by an animal or a human not taught to perform it. Every animal that is born will have certain habits that it will do without previous training. An example of this fact is a hen setting on a dozen eggs, of which six are duck eggs and six are chicken eggs. The eggs will hatch about the same time. The ducks will immediately walk to water and begin to swim. The chickens' first impulse, however, is to scratch the ground. The ducks have had no instruction from the hen on how to swim.

The spider weaves a web of a beautiful geometric pattern as the result of his own impulse. Such wild birds as the Quail, if raised in captivity for the first two or three weeks of its life, will lose the power to fly. The ducks, if deprived of access to water for a like period, will never learn to swim. A chicken which is raised on a floor of linoleum or polished hard wood will never learn to scratch. From the above stated examples it seems a definite conclusion that if one's instinctive processes are not exercised and used early in life they will atrophy and disappear.

It is presumed that the human infant is born with such instinctive processes as: the tendency towards speech, to convey food to the mouth, and many other basic talents, some of which regard music, love of the beautiful, and love of color. If the child doesn't exercise these instincts early in life, the discovering of these talents may come too late to be exercised. The exercising of the talent of music lies in the child's hearing much music and in trying to produce melody with its own voice.

A "monotone" is a person whose ear cannot recognize the differences between intervals of different tones of music. Usually appearing hand in hand with this lack of tonal differences comes a lack of rhythm. In accounting for more than three hundred and fifty music pupils who have all been classified as monotones, and hence incorrect rhythm, we give the following subject cases. Of this number of cases we have studied no pupil who has begun to take music after nine years of age has shown any improvement in his ear or in rhythm. But of those pupils who started music as young as seven years, nearly twenty per cent have shown marked improvement in one year.

In teaching the piano to a child who is monotonic, one should urge him to count aloud. The first awakening of the musical sense usually appears in the voice following the tone of the left hand. Pupils having this instinct awakened in them before nine years of age will very frequently progress as the average pupil will, and in no case has any improvement been noted in the pupils who started in piano lessons after they were nine years old.

Here is a pupil, M. F. G., who started piano lessons at the age of seven. She could not distinguish between any tone intervals, they all seemed alike to her; she could not sing on any given pitch; she could not recognize the most familiar tunes, and her sense of rhythm was very, very poor. Altogether she appeared to be the most unpromising type of a music pupil. For the first year of study neither rhythm nor tone pitch showed the slightest improvement. But soon after that time it was noticeable that in counting aloud she did follow the melodic line of the base in her counting. Within the next six months the pupil was able to sing simple tunes as "My Country Tis of Thee" and others that a child of her age should know. Her sense of rhythm never grew as rapidly as her sense of tone pitch. She continued to study for about six years. At that time she entered a church choir and was able to sing the ordinary church hymns at sight. After graduating from high school she entered college and specialized in voice, graduating and giving a public voice recital. The conclusion must be drawn that if she had not been able to study at that young age her ear would never have been able to improve, but now she sings in public without deviation from pitch and she has never been known to sing off key.

Here is the case of D. R. G. At the age of seven her mother entered her at the college for piano lessons, but after three months study the teacher reported that the pupil was impossible, absolutely lacking in rhythm and in tone sense, and she had a hand with long tapering slender fingers which were a great handicap. Then too, she was so left-handed that she was unable to scratch herself with her right hand and as the piano is a right-handed instrument you can see how greatly handicapped this pupil was. This teacher said it was impossible to teach her anything and so she was transferred to another teacher with

(*Continued on page* 15)

The County Contact System at Illinois State Normal University

LESLIE A. HOLMES

Administrative Assistant
to the President,
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Dr. Leslie A. Holmes, in addition to being the Administrative Assistant, is also head of the County Contact System and Chairman of the Public Relations Committee. He has had experience in the business world and had taught in a high school and junior college before going to Normal University. His Doctor of Philosophy degree is from the University of Illinois.

The County Contact plan as operated at Illinois State Normal University is one phase of the Public Relations program. Up to 1931 it was commonly recognized that Teachers Colleges in general had but little usable information regarding the needs of the school territory they served, primarily because they were unwilling or unable to obtain the facts that were needed for a close-working relationship. They were smug and had a "take it or leave it" attitude. For the most part, the school principals had to help the new teacher adjust to the school and community.

To obtain a better working relationship between the University and the territory it serves, it was necessary to become better acquainted with the territory and in this way help close the gap. With the above factors in mind, the County Contact organization was put into operation. Specifically, the aims of this organization are to:

1. Promote an active program of public relations with school officials and teachers in Illinois. Illinois State Normal University, being recognized as a professional school for the education of teachers, feels that whatever is done to aid the entire field of education will improve the profession. From the point of view of the University, the County Contact plan makes teacher education functional.

2. Bring to the campus the new ideas of progressive educators. This may take the form of modern methods in "'reading', 'riting', and 'rithmetic," by asking to the University educators specialized in these fields, or by developing other generalized or special fields.

3. Encourage the best high school students to become teachers. Most students have a very slight acquaintanceship with any of the colleges and hence look forward to talking to representatives of all schools. This is especially true in high schools where a progressive counseling program is in operation. A nice appearing, well informed, and well mannered teacher from the campus makes an excellent example and goes a long way toward interesting students in teaching.

4. Aid in our counseling program by making the first contacts with freshmen as they arrive on the campus. A freshman receives a "great lift" when his first official contact on the campus is with the county representative with whom he talked at his own high school. Many other contacts made during the students' four years at the University will be mentioned later.

5. Assist the Director of Placement by reporting vacancies and changes in teaching and administrative personnel. When the County Contact program was first organized, there was a great surplus of teachers and one problem was the placement of them. With many contact people in the field, vacancies were reported to the University almost as soon as they occurred. At the present time the picture is reversed. Now when a representative goes to a county he can report to the high school principals or to the superintendents of the elementary schools the fact that we have or have not teachers available for his particular needs.

In many cases, the only way in which the University Placement Bureau is able to find out whether a teacher is ready for promotion is through the reports turned in to it by the County Contact representative. Many well deserved promotions have been obtained by people in the field in this manner. No doubt, many teachers wonder how they happen to have been chosen for a certain position.

6. Encourage a closer relationship with county and city superintendents. Several times a year a county contact representative will visit a county superintendent. This contact which to a great extent, at least on the first visit, is a "get acquainted" one, may develop into a very valuable relationship, in that the county superintendent feels that he has a friend on the campus and will feel free to come in and discuss problems with various University personnel. This same statement holds good for the city superintendent. It is not uncommon that when city superintendents or high school principals come to the campus they arrange to fill their cars with prospective students to give them an opportunity to see the University in

operation, as they have learned they are welcome.

7. Visit and talk with our graduates in their own teaching environment. When the County Contact representative visits a teacher in the classroom, he has an opportunity to see him in action. Later, when the representative talks with the principal, a word of commendation about the teacher may go a long way toward raising the value of the teacher from a principal's point of view—it helps the teacher sell himself. In some cases, a word dropped here and there to the teacher may aid greatly in the promotion of better teaching and better relations with the other teachers and the principal. On the other hand, a successful graduate can give to the representative many suggestions that may ultimately help improve the work of the inexperienced or the partially successful teacher.

8. Encourage teachers to improve their preparation by enrolling in University extension courses and summer school. Courses that are needed are discussed by the county representative and the teacher, with the result that a report is given to the director of extension, suggesting what courses should be offered in the territory. In many cases teachers who had not been in the University for as many as 25 years were encouraged by the county representative to take additional college work.

9. Establish contacts with alumni who are not teachers but live in the various counties. This group can give a great deal of information to the contact representative by offering suggestions to him as experienced "on-lookers." They know the background of teaching and do give many valuable ideas.

10. Encourage the establishment of alumni chapters. In visiting a county in one or two days, it is possible for a contact representative to encourage people in different communities to think in terms of establishing an alumni chapter or of having alumni meetings that encourage renewed interest in the University and its teacher education program.

11. Visit classrooms to observe the teaching of persons other than our graduates. Visits of this sort encourage an exchange of ideas that in many cases are of mutual value.

12. Supply University services to the counties in the form of lectures, music, assembly programs, and faculty curriculum advisors. Since the University has specialists in all phases of teacher education, it is possible to offer the services of these people wherever they may be desired.

13. Take to the counties modern education information. This may be in the form of new publications or of new techniques that have been tried and found to be of value.

14. Condition residents of the counties so that they will be more receptive to good educational thought and procedures developed at the University. By becoming well ecquainted with the people in our territory, they are more willing to listen and weigh our suggestions. They also think more freely in terms of the University when a speaker or when special aid is desired.

15. Interest the general public in teacher education. During the visit, the county contact representative lets it be known at various places of business, for example, hotels, service stations, and restaurants, that he is from the University and interested in the education of that city or county. Likewise, children see him at their school and carry that information home to the parents.

16. Promote the teaching profession between educators and the public. Most educational programs are of state-wide interest, and a few well placed statements from the representative may go a long way toward promoting the betterment of the profession. The recent campaign to consolidate rural schools in Illinois may be cited as an example.

17. Learn how to better present our teacher education program to the students to make possible the development of superior teachers. From the report turned in at the end of the visit, a great number of suggestions of value may be obtained. These, in turn, are incorporated in courses offered at the University for the improvement of the preparation of teachers.

18. Help develop the University faculty. Contacts made by our representatives with various educators tend to develop our faculty. They are able to see an education program in action and thus appreciate the improvement in the work that they are doing. From the university point of view this is one of the important aims of the program.

How Organized

The entire program is, at present, under the direction of the chairman of the Public Relations Committee. The President of the University has appointed thirty-five members of the faculty to be contact representatives in the central part of Illinois. This number does not mean that each member has a county, for in some cases two counties have been assigned to one person. These counties have a small population and the number of students coming to us is small, or because the county is at some distance from the University, it supplies the school with few students. On the other hand, nine members are assigned to McLean county in which the University is located. The four largest high schools in this county have a contact percon appointed to each of them.

Not all who volunteer to be contact representatives are by nature suited to this type of work. Generally, a representative is picked with the point of view of a well rounded background of experience in administration and in teaching and if possible, a person is chosen who has lived or taught in the area or who, for some reason, is interested in the county.

Many freshmen come to the University from counties scattered throughout Illinois that are not

served by our contact organization. For these counties, counselors, who are not contact representatives, are appointed to help in the University counseling program. These counselors confine their work to the campus and do not visit the counties from which the students come.

Once a semester, frequently at the beginning, a meeting is called so that all members may discuss their coming visits, and to develop a uniform plan of procedure for the semester. This discussion usually consists of specific suggestions as to the number of times to visit each county (commonly twice a semester), what procedures to follow before visiting the county and of general suggestions as to what to stress while in the county, such as the value of the Future Teachers of America Clubs in the schools, visits to our recent graduates now teaching in the county, or invitations to administrators and teachers to come to the University for special meetings.

It is not always easy for a representative to be away from the campus for a day or two at a time, since it is necessary for him to make arrangements for other faculty members to take his classes. This is a good procedure for it encourages the point of view that even though a faculty member is not a contact representative, he is having a part in the program. The visits are financed by the University under state regulations.

How Operated

If a new county is being incorporated into the County Contact program, letters are written by the representative to the county superintendent and to the principals of the large high schools and grade schools, explaining our plan and asking permission to put it in operation in their districts. This permisson has always been readily given and is followed by a visit of the contact representative who will discuss our plans with them. At the same time he may receive maps of the county or territory and data pertinent to the operation of the school systems.

If the county is one of our contact counties, ,several days before leaving the campus the representative writes to the educator to make sure that the visit will be at a convenient time. In preparation for the visit, the representative may ask the Bureau of Appointments for a list of names of our graduates who are new teachers in the county. He will also ask the Director of Admissions for the names of prospective students who may be visited while he is in the territory, and for information regarding scholarships. The Director of Publicity will supply publicity materials and catalogues and will send an article to the newspapers of the county telling of the contemplated visit. He may also visit the office of the Administrative Assistant to the President to receive certain special materials, such as the school year book and detailed information concerning the area. A yearbook is given to the larger high schools of the state each year, to be placed in the school library for the reference of the students.

After the representative returns to the campus, he will write a report dealing with the visit. This report gives information about the political, racial, and economic background of the area as well as the development of the school system, so far as modern education is concerned. In many cases the interests of the senior class are mentioned and not infrequently the interests of the other high school classes, starting with the beginning freshmen. Upon examination, certain bits of information may be found to be common to all reports. Eventually these points are discussed by committees and if desirable, action is inaugurated. Other reports may contain information of interest only to the county or a part of a county. These points are likewise noted and when they appear in several different reports, action regarding them may be instituted. At the end of the school year an annual report is prepared giving the problems and progress of the previous year. This report goes to all contact representatives and to others interested in the program.

Even when back on the campus, the representative maintains a keen interest in his county. Since he has probably already talked with incoming freshmen when he was in their home town, the representative is a logical one to make the first contact with the new students. This first contact is an extremely important one.

When the schools in Central Illinois participate in radio programs originating on the campus or in contests, the contact representative takes charge of the students and makes sure that they are made to feel at home. One of the ways is to invite them to the cafeteria for ice cream, cake, and milk as guests of the University. This plan is also put into operation on College Day when the University has over 1,000 high school students as its guests, not only to attend clases and athletic events, but to gather at a complimentary luncheon at noon in the gymnasium.

Frequently the Director of the Bureau of Appointments will suggest that a graduate visit the contact person before going to a certain city for a ninterview. These graduates are greatly helped in this manner since the contact representative is probably the best informed person on the campus concerning that particular position. He will know the type of school and the teachers in the school as well as the type of town and its inhabitants.

Progress

It is difficult to evaluate the progress that has been made since the inception of the County Contact program back in 1933. It still has a long way to go, but much of the ground work has been completed in the counties in which the University now operates.

When this plan was first inaugurated, one of the most difficult obstacles to overcome was the fact

that many of the school officials thought that the University was "snooping." In a few cases a representative was unable to gain admission to a school. It was hard for an administrator to conceive of a University that wanted their opinion on how to improve the education of teachers. Once the educators were convinced that the University was sincere, it received their cooperation to the utmost. With but very few exceptions the contact representatives are welcomed on their arrival and asked to come back as often as possible.

As a result of this work, the University has changed the content of some courses and inaugurated new ones. The course Observation and Reading required of all freshmen and workshops, may be sited as an example.

The Future

When conditions become more stable, the contact program at Illinois State Normal University will expand in at least three directions:

1. To include all of Illinois and perhaps parts of adjacent states.

2. To have contact representatives (either from the University or some local graduates) available in every large city in Illinois and adjaining states.

3. To further promote the program of co-operation between the alumni and the contact representatives.

Even when the plan for the future develops to its fullest, the general purpose will be the same as it is at the present time—a plan to bring to the University an over-all picture of each area and to take that area the best educational thought from a University devoted to the education of teachers.

WRIGHTSTONE

(*Continued from page* 3)

ference as large as or larger than that observed by chance alone). The experimental group was also superior on the *Co-operative English Test of Reading Comprehension* (below 1% level).

No significant difference between the experimental and control groups was found on the Scale of Civic Beliefs.

It is safe to infer that the students in the experimental integrated or core curriculum gained more than those in the conventional ninth-year curriculum in ability to reason in reading and in ability to find and use materials for study purposes. These two findings are in accord with other studies of the newer versus the older type of education.

In addition to the comparative data, personal-social adjustment of the experimental pupils has been studied for desirable changes in the emotional and social adjustment. Evidence has been gathered by means of the California Test of Personality, sociometric analysis and anecdotal records. The evidence shows:

1. Growth in emotional adjustment for a majority of the pupils. Cumulative anecdotal records on individual children provide the evidence for this generalization, and it is supported indirectly by the sociometric data.
2. Growth in social adjustment for a majority of the pupils. The sociometric analysis and anecdotal records provide the evidence for this generalization.

This evaluation represents the first of a series of measurements of pupil growth and progress. Continued studies of the curriculum experiment are in progress. These later studies will be more comprehensive than this initial study, especially in evaluating personal and social adjustment of the pupils.

TABLE I.
Mean Differences in Gain Between Initial and Final Test Experimental and Control Groups
(86 Matched Pairs)

Test	Standard Error of Diff.	Exp.-Control	Difference in Gain:	Level of Confidence
Co-operative Test of Reading Comprehension				
Speed of Comprehension	+2.07	.99	2.09	.02 — .05
Level of Comprehension	+2.56	1.01	2.53	.01 — .02
Vovabulary	+1.20	.68	1.76	.05 — .10
Total (Av'ge) Comprerension	+2.35	.71	3.31	less than .01
Co-operative Test of Social Studies Abilities				
Part I Obtaining Facts	—1.14	1.61	.71	.40 — .50
Part III Interpreting Facts	+1.47	1.21	1.21	.20 — .30
Part IV Applying Generalizations	+.40	1.27	.31	.70 — .70
Total	+1.07	2.53	.42	.60 — .70
Iowa Test of Work-Study Skills				
Part II Use of References	+ .70	.49	1.43	.10 — .20
Part III Use of Index	+1.60	.48	3.33	less than .01
Part IV Use of Dictionary	+ .43	.47	.92	.30 — .40
Part V Reading Graphs. Charts, Tables	+1.78	.64	2.78	less than .01
Total	+4.42	1.17	3.78	less than .01
Co-operative Mathematics Test	—1.12	1.49	.75	.40 — .50
Wrightsone Scale of Civic Beliefs	+ .33	1.16	.28	.70 — .80

SEAY

(*Continued from page* 5)

farm. A teachers' guide tells how to help pupils use the information in the series, and where to find additional information. According to the guide, the series may be used not only to teach beginners to read, but also to provide supplementary and remedial reading for older pupils. Even parents, many of whom are very poor readers, can use the books.

A second-grade series of ten books, with teachers' guide, tells the story of the Smith family. Father, mother, and four children turn to the farm for a livelihood after the saw mill closes for lack of logs. They plan the farm, start a new

garden, build a fish pond, plant grapes and berries and fruit and nut trees, make sorghum and keep bees, buy a milk goat, and win prizes at the county fair. The illustrated manual gives many suggestions for making schoolrooms attractive, as well as for planning pupil activities.

Chickens are the topic of a third-grade series of five books and a manual. Breeds of chickens, housing and feeding, preserving eggs in water glass, and ways of canning chicken are described. Children in the schools were enthusiastic about these books, and requested more material on chickens. Another series of three books was prepared for the upper elementary grades.

One book for upper elementary grades describes in detail how to grow sorghum cane and make it into molasses, and how to build a beehive and care for bees. Another tells what to do in a garden each month, and includes such information as how to care for garden tools and how to make and use a hotbed. Other books at various grade levels include a language workbook with a teachers' guide, a songbook of old melodies and new words about food, and books on raising strawberries and keeping milk clean.

The results show that the new materials based on the needs of children serve two purposes. They are helping to improve food practices in the communities. And the children are learning faster now than they did before the experiment started. Reading comprehension particularly has improved.

It is hoped that the next generation of citizens in these communities will be a more literate one, as well as a much healthier one, because of the Sloan Experiment.

ELDER

(*Continued from page* 6)

the number of persons leaving the teaching profession annually in pre-war years—should be selected and recommended annually for preparation for the teaching profession. To each of these 50,000 outstanding young people should be granted from state or federal funds a scholarship amounting to $1000 annually for five years—until the Master's degree and a teaching certificate have been acquired. The maximum outlay for the duration of this program of scholarships would be mere pin money—one-fourth of one billion dollars per year. It would be only one inexpensive but important step in the direction of placing first things first in our national social and economic fabric.

3. To be most effective the preceding steps should be accompanied by the adoption of more favorable working conditions, more reasonable teaching loads, and salary schedules providing financial remuneration in proportion to the responsibilities inherent in the teaching profession. In short, conditions should be made so favorable in every way that it would be as uncommon for teachers to leave their profession for medicine, law, business or other attractive vocations as it is now uncommon for members of these and similar occupations to gravitate toward teaching. Only in this manner can society expect superior young men and women to enter its basic profession in sufficient numbers to undergird and guarantee the efficiency of the personnel of all other leading professions and occupations; only in this manner can civilization rise above its present level.

Society as a whole can ill afford not to adopt a program similar to that outlined above. "From the long-range point of view it is important for everyone that unusual ability, so long as it is accompanied by social responsibility, be cherished, encouraged, stimulated, and given any special treatment necessary to induce it to produce to capacity."[2] The teaching profession and teachers colleges are failing to face the outstanding educational challenge of our time if they do not assume the leadership and bend every effort toward the realization of this ideal.

[2]Bridgman, P. W. "The Prospect for Intelligence." *The Yale Review*. Yale University Press, New Haven, Conn. Spring, 1945.

MULLER

(*Continued from page* 7)

the school. The school motto "Responsibility" has its origin in the days of Colonel Parker when he was trying to impress, not only the children in the Parker Elementary School, but also the embryo teachers in what was then the Cook County Normal School, with the great responsibility of living effectively.

Ella Flagg Young and William Bishop Owen left definite impressions upon the school and those fortunate enough to have worked with them.

As a young teacher on the college staff, I shall always remember the quality of humanness in Dr. Owen, exhibited to both faculty and students, his concern for the complete student, not only the "academic section", and his concern for both the student's present and future.

So it is that a physical and mental health program of required courses inaugurated during Dr. Owen's time, although revised from time to time as to content of individual courses, is still in effect today. This program includes courses in physiology, microbiology, bacteriology, nutrition, physical education activities, first aid and safety, health education, psychology courses such as problems in student adjustment, mental hygiene and personality development, general psychology, child development and educational psychology.

At this point may I emphasize that the College does not believe in attaining the goal of "Effective Living" by either required courses or informal instruction but, as indicated in my reply to Dr. Gray, by a combination of both taking place concurrently.

Under these circumstances, I do not feel qualified to state advantages and limitations of the required

course plan of handling the problem, for in our situation deductions cannot be based on facts that would exclude the informal approach. And I learned long ago from Dr. Carlson on this campus of the University of Chicago that one does not base conclusions on inadequate scientific data.

However, we do find that the overall exposure of the student body to these courses, which makes it possible to reach many who would never have elected them of their own accord, provides many of those exposed with unexpected "takes".

In our counseling, we find that many Freshmen are amazed at their rating within their college class, particularly those who stood near the top of their high school class and find themselves a considerable distance from that spot in their college class, as shown by the guidance examinations given during the first week as part of the Orientation procedure at Chicago Teachers College.

Then, too, those students who travel two to two and one-half hours each way, a total of four to five hours per day, do not need to wait until fatigue and low grades confront them to learn that the increased number of hours of travel are energy consuming. In their beginning psychology course they learned that this was a passable result of the long hours of travel and, if they believed it, were able to make the necessary adjustments in their 24 hour day early in their college career before disaster overtook them.

Many students find solutions to their own and their family problems in the *Family Life Education* and *Nutrition* courses, designated as Home Economics 111 and 110, respectively.

Students who live sheltered lives at home are seldom aware of actual living conditions in communities other than their own in a metropolitan area such as Chicago. Unless they learn about some of the things first hand as taught in Social Science 202, *A Study of Metropolitan Chicago*, and how these conditions developed, they will be unable to understand conditions and situations in the various areas of the city nor will they be able to cope with phases of them arising in the classroom.

Soon after the first students who had taken the *Family Life Education* and *Community Studies* courses began to do their student teaching and later substituting in the elementary schools we had favorable reports from the principals in regard to students being better able to understand and cope with conditions and problems in these areas.

Again we find in counseling, that when the counselor feels that a specific area of a given course is applicable to the situation, he can safely assume and verify that a Freshman counselee is taking that course, that a Junior has had, or is taking certain courses and has not had other courses. If the student has had the course in question, phases of which are applicable as an approach to the situation under consideration, an immediate common approach is available without preliminaries.

As stated in our catalog: "The curriculum is designed to provide a series of guided experiences that will build an understanding of children and their needs, an appreciation of community resources and problems, and skill and efficiency in conducting classrooms so that worthwhile learning and steady growth of pupils may take place. Emphasis is placed on social values, but fundamental knowledge and skills necessary for a basic educational foundation are not neglected. Such skills are to be properly motivated and carried over into actual use. Necessary techniques in teaching are given adequate attention".

Shall we consider the scope and content of the work offered in the various required courses at Chicago Teachers College in which effective living is emphasized?

Some of these courses have been referred to earlier. The courses Geography 101, *Geography of the Peoples of the World*, Psychology 108, *Problems of Student Adjustment*, Psychology 106, *Mental Hygiene and Personality*, are offered during the Freshman year.

The two Home Economics courses 1111, *Family Life Education* and 110 *Nutrition*, Physical Education 111, *Physical Fitness*, and Science 204, *Physiology and Microbiology*, are offered at the Sophomore level.

With a few exceptions Science 103, *Physical Science*, Philosophy 201, *Introduction to Philosophy*, Physical Education 203, *First Aid and Safety Education* and Physical Education 204, *Health Education*, and Social Science 202, *A Study of Metropolitan Chicago*, are offered at the Junior level.

The *Family Life Education* course is one of our most popular courses. The instructor of the course is frequently called upon to speak to adult groups. All but the *Family Life Education*, *A Study of Metropolitan Chicago* and *Introduction to College Mathematics* courses have been in the curriculum in some form or other since Dr. Owen's time.

The first two courses, *Family Life Education* and *A Study of Metropolitan Chicago* made their first appearance in the 1939 curriculum and the last named course, *Introduction to College Mathematics* in the 1944 curriculum.

Let us consider the life history of one of the older courses. The forerunner of our present Psychology 108 and 106 course, had its inception back in the twenties, about 1925. At this time first semester Freshmen failures in one or more subjects was exceedingly high, about 28 to 30 percent. Dr. Owen decided to determine the cause. During the following semester he and the Dean of Women counselled all first semester Freshmen whose work was reported by the faculty as barely passing or failing.

At the end of that semester the failures were reduced 50 percent, however the President and the Dean of Women found that the counsel-

ing took so much of their time, that they did not have sufficient time for their administrative and other duties.

The following semester Dr. Stella B. Vincent, then a member of the Psychology Department, was asked to give a course to entering freshmen that would help them to adjust to college and to life. Each class met one period per week with the instructor and one period per week was set aside for scheduled conferences. The faculty in whose classes the students were not doing well were also interviewed to see where they might be of assistance in diagnosing the cause for poor work. The percentage of failures continued to decrease.

Then the Mental Hygiene teaching load, which course Dr. Vincent also taught, became so heavy that one of the other members of the department, Dr. Ashley, was asked to teach the course. He became seriously ill a few weeks after the beginning of the semester and a substitute had to take his classes. The substitute was not especially prepared in this area of psychology and at the end of the semester the failures were double the number of the previous semester.

The next semester Mr. Eilert of the Psychology Department was asked to teach the course. At the end of that semester the percentage of failures was down to 15 percent, then at the end of following semesters to 11, 12, 10, 11, 6 percent, then it continued between 6 and 8 percent, one semester it was zero percent, then it fluctuated between 3 and 6 percent, then another semester zero percent, and so on.

The percentage falling below 10 percent coincides with the change in procedure in the admission examination, which resulted in a more select group of Freshmen. This occurred in 1930.

The course has been revised from time to time until now two courses have supplanted the original.

Information concerning the personnel services, in general, and in particular concerning pre-registration and registration procedures, the selection of a minor sequence, academic guidance, health, remedial speech and reading, college records and their uses, the teaching profession and what is expected of it, are presented by the Director of Personnel during several meeting of Psychology 108. During the present semester instruction in library science as it pertains to the college student and to the libraries in elementary schools has been added to the course.

POSTON

(*Continued from page 8*)

whom she showed very slow but unmistakable progress. Her progress was not one-fourth as rapid as of the average child of that age. But with continuous study, in which she counted aloud, we detected that she could carry a tune. After three years she had progressed to about the average pupil in one year, and from then on her progress was much more rapid. At the age of seventeen years she registered at Georgia Weslyn College to major in piano. At the end of her course she gave a magnificent recital.

In all of these cases the saving hope seemed to be the counting aloud at the piano. These two cases are typical; one turned out to be a singer and one to be a pianist with no faults of ear or rhythm. This convinces me that if you get the child young enough, this spark which may be almost extinct is carefully blown into a flame, but that after nine years of age the instinct disappears quickly and is unable to be developed.

There is further evidence showing that little or no improvement has ever been noticed concerning rhythm or tone after the age of ten or eleven years. Records kept by thirty-five public school music supervisors show that when beginning in the first grade (age six) two-thirds of the pupils cannot carry a tune, but at the end of the year fully one-half can do so. By the end of the second year (seven and eight years) three-fourths have awakened the instinct, and after the age of nine or ten the monotone ratio remains constant at ten to fifteen per cent.

Abstracts of Unpublished Masters Theses

Klausmeier, Herbert J., *An Experiment With Two Methods of Teaching Social Studies in High School.* August, 1947. 234 pp. (No. 560).

Problem. This experiment was conducted to determine by means of objective tests which was the better method of teaching social studies in high school, the lecture method or the textbook-and-recitation method, and to determine by means of a questionnaire which method the students preferred.

Method. For eight weeks during the second semester of the school year, 1946-1947, two ninth-grade geography classes and two eleventh-grade United State history classes were taught by the writer using the two different teaching methods. All factors were kept constant except that in one geography class and in one history class, the writer lec-

tured for four weeks while the two corresponding classes he taught by the textbook-recitation method. At the end of four weeks objective tests were administered, and the teaching method was reversed in the four classes. At the end of eight weeks a questionnaire was administered to determine student preferences.

Comparison of the classes was made by mean scores and critical ratios based on standard error to determine the statistical significance of differences between the true means.

Findings. The results of the comparison of the two methods of teaching showed that the lecture method resulted in slightly higher achievement by the students; however the superiority was too small to be of statistical significance.

Of the ninth and eleventh-grade students, 84.75 per cent and 67.27 per cent, respectively, preferred to be taught by the lecture method.

Howerton, Clarence. *Historical and Geographical Development of Education in Vincennes City and Vincennes Township.* July, 1947. 59 pp. (No. 557).

Problem. This research was made in an effort to determine the effect that Geography and History had in the establishment and growth of schools in the city of Vincennes and Vincennes Township.

Method. The records left by other writers of early Indiana History and Indiana Geography were studied and compared to determine the relation of Geography and History in the first established schools in the city and township.

Findings. The results of the studies of the early writings of Indiana History and Indiana Geography makes it very clear that the Geographical conditions were a determining factor in the location of the school buildings.

History points out the fact that all of the early schools established were Catholic Church schools and remained as such until about 1850, when we had the first public schools established in the city.

History also gives us the facts that industry has played an important part in the growth of public schools, from the one-room school in 1850 to the modern up-to-date school of 1947.

Bennett, James F. *Elements of Difficulty in Advanced Arithmetic Experienced by a High School Junior Class.* July, 1947. 17 pp. (No. 617).

Problem. The study proposed to point out the difficulties encountered in Form D of the Stanford Advanced Arithmetic Test given to the Junior class of Francis Joseph Reitz High School, Evansville, Indiana.

Method. The Stanford Achievement Test, Advanced Arithmetic, Form D, was administered to all members of the Junior class of F. J. Reitz High School, Evansville, Indiana. A total of 276 students took the test. An extra five minutes working time was added to the standard 50-minute period as the students were required to use a separate answer sheet. The directions for administering the test were followed except for the variance noted above. The tests were scored by the objective key which is supplied with the test. The tests were given equated scores from the scale which appears on the cover of each test form.

A tabulation of the correct, wrong, and omitted problems was made for each part of the test. The percentage of errors was made disregarding the omitted problems. A variable end was necessary as few students were able to finish the test in the allotted 55 minutes. The types of errors were then tabulated for each problem not correctly worked.

Findings:

I. Placement of the decimal point is indicated as a major source of error in decimal problems.

II. A lack of speed is indicated by the many omitted problems.

III. Use of the wrong process and faulty computation are responsible for most of the errors in advanced arithmetic by eleventh grade high school pupils.

IV. A need for remedial mathematics courses is indicated. Being a study of a particular group, the results may not be typical of those that could be obtained in other schools.

Dalton, Dean Aubrey, *A Survey of the Leisure-Time Activities, Opinions, Interests, and Attitudes of Students in Three Indiana Rural High School Communities.* June, -947. 133 pp. (No. 554).

Problem. This study had as its goal a survey of the leisure-time activities, opinions, interests, and attitudes of two hundred twenty-eight students in three Indiana rural high school communities, namely: Harrison Township High School, Clay City; Perry Township High School, Cory; and Jefferson Township High School, Coal City.

Method. The questionnaire-survey method was followed in the study, with a printed questionnaire administered to the entire student bory in each of the high schools. The data were tabulated and analyzed on the basis of school, sex, and classification in school. Because of the comprehensiveness of the questionnaire, many of the data secured in the study were excluded because of irrelevance to the purpose of the present research.

Findings. A survey of the activities of the students revealed that collecting was the favorite hobby of both boys and girls. Musical instruments were played by 20 per cent of the boys and 39 per cent of the girls. Dancing was reported by 23 per cent of the boys and 37 per cent of the girls. The favorite activities of boys were basketball, swimming, and softball; the girls reported reading, movies, and radio. Movies were very popular, attended frequently by 90 per cent of the boys and 87 per cent of the girls.

Church membership was reported by 59 per cent of the boys and 59

per cent of the girls, with Sunday School the favorite service of the church. The youth group ranked third in frequency of organizational affiliation.

Favorite radio programs of the boys were humorous in nature, with Red Skelton ranked first. "Westerns" were also popular. The girls indicated greater variety of radio preferences, with special interest in musicals. Movie preferences were similar to the above, with boys preferring comedy, Westerns, and gangsters; girls reported love story, musical, and comedy.

The survey of attitudes and opinions revealed the following: Most of the students believed that the church should provide spare-time activities. A recreation hall or "teen-canteen" was felt to be the greatest need for community recreation.

It was the opinion of both boys and girls that youth spend the most time at movies, loafing on streets, and out-of-town dates or at skating rinks. Furthermore, the drug store or restaurant was the favorite "hang out."

Reading interests of the youth revealed the following preferences in types of reading: Readers Digest, Look, Life, and the Saturday Evening Post, with the same interests by boys and girls. It was also interesting to learn that these young people have access to at least one newspaper daily, both local and distant papers being among the preferences.

Proffitt, Searle T. *A Study of the Attitudes of Boys in the Terre Haute High Schools toward Their Physical Education Programs.* July, 1947. 60 pp. (No. 559).

Problem. It was the purpose of this study to discover the attitude of boys in the Terre Haute high schools toward the existing physical education programs.

Methods. Data were secured by the questionnaire method. An attempt was made to reach all boys in the upper four grades in the six Terre Haute junior and senior high schools. Responses were secured from 951 of the total male enrollment of 1,176—a response of almost 81 per cent.

Findings. The 951 students reached in this survey probably gave as nearly their true attitudes toward physical education in Terre Haute as it is possible to obtain.

No significant differences were revealed among the students of different grades in the same school in respect to their attatudes toward physical education.

The attitude of all groups toward the existing physical education program as a whole was highly favorable with only negligible numbers looking upon it with dislike.

The students preferred team games and competitive sports, but they ranked the more formal types of physical education near the top in their attitude toward events having beneficial qualities.

The numbers professing not to have physical education activities which were listed was encouragingly small. The important reason in most of these cases was the lack of adequate facilities.

Ninety per cent of all students felt that physical education should be required with only negligible number, four per cent, indicating that it should not be required. The greatest percentage of students preferred daily class meetings.

Over 85 per cent of all students like their present instructors with only 7 per cent professing to dislike them.

Eighty-six per cent of all students indicated that they felt that their programs has been beneficial, while only 8 per cent felt that it had not been.

Special restricted and corrective classes are desired by 80 per cent of those who are excused from physical education; however, the numbers involved at present is hardly sufficient to warrant the formation of such classes.

Without having been asked, approximately 80 students wrote in their own words usable statements explaining why they felt as they did toward physical education. Statements explaining favorable attitudes well outnumbered unfavorable attitudes. The commonest reasons for favorable attitudes were that the present programs were enjoyable as well as beneficial. The commonest reasons for unfavorable attitudes were that facilities were inadequate and existing programs were too strenuous.

Garrigus, John J., *An Investigation of Teacher Attitudes Toward Supervision.* June 7, 1947. (No. 556)

Problem. The purpose of this investigation was to collect, organize, and present materials bearing on the attitudes of high school teachers toward supervision.

Method. Questionnaires were mailed to teachers in high schools of 10 or more teachers, and the returned questionnaires were treated in the usual research manner.

Findings. After the questionnaires were classified and tabulated, the following results were evident:

1. The amount of supervision in high schools with 10 or more teachers is very inadequate, over 60 per cent of the teachers received 1 hour or less supervision in the fall semester of 1946.

2. The number of years of teaching experience does not seem to make any appreciable difference in the teachers' attitudes toward supervision.

3. The attitude of teachers toward good supervision is very favorable.

4. The tendency seemed to be toward "child-centered" supervision.

5. Principals do most of the supervision in the high schools.

6. Very few school corporations maintain special supervisors on their advisory staff.

7. Several teachers think that our colleges should emphasize training for supervision more when preparing administrators for their position.

Nale, Russell M. *A Survey of the Teaching Loads of the Secondary School Teachers of Montgomery County.* July, 1947. 53 pp. No. ——).

Problem. It was the purpose of this study (1) to determine the average teaching load, as measured by the Douglass formula, for the secondary school teachers of Montgomery County, Indiana; (2) to compare this average load with standards for teachers in other places; (3) to compare the teaching load for the county school teachers with the teaching load of the Crawfordsville teachers; and to find the average class size, average number of classes taught, average number of preparations required, average number of subject fields, and the average pupil-teacher ratio for Montgomery County.

Method. From reports in the office of the county superintendent, from questionnaires, and from personal interviews, data was collected concerning the daily programs of the 125 teachers in the twelve schools involved in this study. This data was examined to see what facts could be learned about the items given above as the purpose of this study.

Findings. The number of teaching fields per teacher varied from one to five with the average being 3.00 fields in the county schools and 1.33 fields in Crawfordsville. Thus the county teachers were overloaded in this respect.

The Crawfordsville teachers were teaching more daily class sections than the county teachers, but the loads in both cases were lower than those found in previous studies. Crawfordsville teachers taught 4.91 class sections daily that required 3.01 preparations. This is very close to the North Central recommendation of not more than five classes with three preparations. County teachers taught 4.47 class sections daily with 4.17 preparations needed.

The average teacher-pupil ratio in the county schools was 1:13-3 while in Crawfordsville it was 1:20.9. The teacher-pupil ratio for the state came in between these at 1:17.

The average size class for the county schools was 14.9 pupils while in Crawfordsville the average class was 21.2 pupils. Class size increased with the size of the school.

The teaching loads when computed by the Douglass formula were heaviest In the smaller county schools, but Crawfordsville teachers had the heaviest loads of all. The average load for the county teachers was 25.85 formula units. The average load for Crawfordsville was 29.66 formula units. This load for Crawfordsville was very close to the average load reported in other studies.

The rank of the teachers of the various subject fields, in descending order of heaviness of load was: physical education (men), social science, industrial arts and vocational agriculture, science, commerce, English, home economics, mathematics, physical education (women), language, music, and art.

Loads of administrators were too heavy, as the average was 17.2 load units.

Physical education, music, and vocational agriculture teachers had the heaviest cooperative loads. The average cooperative load for the county school teachers was 4.72 load units. The average cooperative load for the Crawfordsville school teachers was 3.91 load units.

Snyder, Robert P. *A Test and a Comparison of the Effects of the Prevailing Physical Education Programs in the Terre Haute, Indiana, High Schools.* June, 1947. 123 pp. (No. 567).

Problem. The purpose of this study was to determine the effects of the physical education programs on the boys that are subject to them. During the past war, the physical education programs were of high calibre. This study was to find whether or not the standards have been lowered and, if so, to what degree.

Method. The research method was used in this study. An achievement test was given in the fall. The same test was given in the spring. The results of the test were tabulated. Exhaustive comparisons were made within each test, between each test, and of the improvements. Any improvement was credited to the physical education program.

Findings. The result of the two testings showed that there was improvement, indicating favorable effects of the physical education programs. The amount of improvement was erratic, showing that some schools specialized in particular phases of big muscle activity. In some cases there was no improvement at all. The comparisons were too inconsistent to have much significance. This study showed that even though there was some improvement, the extent of that improvement leaves much to be desired. The physical education programs should possibly be reorganized to accomplish their true responsibility.

Perkins, Richard W. *A History of College Entrance Requirements in Indiana.* August, 1947. 57 pp. (No. 565).

Problem. It was the purpose of this study to discover, trace, and interpret the trend of college entrance requirements in Indiana from the establishment of the first college course in an institution of higher education in the state to the present year of 1947.

Method. In general the discussion and treatment in this study is of the historical nature. An attempt has been made to treat from a practical and scientific point of view those aspects which seemed most significant. Complete data were gathered from twenty-three colleges in Indiana. The task required minute examination of over two thousand college catalogues.

Conclusions and Recommendations. A student can take any subject he wishes, so long as he takes English, algebra, geometry, foreign language and history, say nearly

two-thirds of the colleges of Indiana to the high-school student. Therefore, it would seem that nearly two-thirds of the colleges in Indiana are still wedded to the academic curriculum. Some of them are breaking away in theory, but practice has not entirely caught up with theoretical concepts.

It would seem, on the basis of the facts presented, that college entrance requirements are liberal so far as academic requirements are concerned. One-third of the colleges, including three of the four State institutions, make no demands whatever, and the fourth state institution requires no foreign language. Entrance requirements in several of the best colleges of the state are now more liberal than high school graduation requirements.

The following recommendations seem to be justified from the findings of this study:

1. A start might be made by the fourteen colleges in Indiana which do not accept high-school graduates without question by examining the results from those which have adopted such a plan.

2. The plan now used by Indiana University is to be recommended. It makes provisions for accepting high-school graduates without questions into the junior college. While in the junior college then the student may make any special preparation that is necessary for work in specialized fields in the senior college.

3. More stress should be placed upon personal qualifications than upon subject matter covered. There has been a decided trend in this direction in recent years. However, there is still room for improvement upon this method.

4. Any program or plan of admission which will provide as much chance for the average student as for the superior one could be considered as satisfactory.

Polk, Julian. *An Investigation of the Comparative Scholastic Achievements of Fifty Students Before and After Their Marriages.* August, 1947. 48 pp. (No. ——).

Problem. This study was made in an attempt to present some information on the subject that marriage has an effect on scholarship. Research was done to provide facts and help form opinions concerning the problem.

Method. Library research provided very little information on this subject because not much has been written about this particular phase of marriage in college. Some data were found at the college on form cards and records that are kept on file in various offices. Other data were collected by use of a questionnaire card sen to the students included in this study.

Findings. The results of the study show that the married men made, in 66 2/3 per cent of the cases, an increase in scholastic achievement after marriage; that the married women in 55 per cent of the cases, showed a decrease in scholarship after marriage; and that the group as a whole made, in 58 per cent of the cases, a gain in scholarship after marriage.

Russell, Mary M. *The Training of Preschool Teachers in Certain Teacher Training Institutions.* August, 1947. pp. (No. ——).

Problem. It was the purpose of this study to ascertain what training teacher training institutions are offering for the traning of preschool teachers and to set up a pattern for the training of preschool teachers.

Method. Letters were written to seventy-seven heads of education departments, deans, and other administrative officials of colleges to obtain information concerning the traininf that s offered for the preschool teacher. Catalogues of twenty-six colleges were studied with reference to the training of the preschool teacher. The data were tabulated and tables and figures made showing the results. A course of study was planned that could be used in the training of preschool teachers.

Findings. Of the colleges studied, twenty-one offered a Bachelor's degree in kindergarten teaching; six offered a Bachelor's degree in nursery school teaching. The stress in the training of preschool teachers was in the education field. All colleges studied required Directed Training. Few colleges studied required Educational Sociology, Guidance Course, Audio-Visual Aids, Nutrition and Exceptional Children.

Anderson, Kenneth. *An Analysis of the Opinions of One Hundred Thirty-eight Outstanding High-school Seniors Regarding the Teaching Profession.* August, 1947. 35 pp. (No. 566).

Problem. It is the purpose of this survey to determine the opinions of outstanding high-school seniors regarding the teaching profession as a career.

Procedure. In order to obtain high-school students' opinions, 138 essays were obtained from the Indiana State Teachers Association Scholarship Foundation. These essays were written by outstanding high-school seniors competing for scholarships in state colleges and universities. The essay was the final requirement which the student had to meet to gain a scholarship.

The analysis was made of students' opinions concerning the teaching profession as listed in their essays. According to these instructions, the students were to give their opinions on the following suggested factors relative to the teaching profession: (1) financial income and security of position, (2) social prestige, (3) opportunity for service, and (4) opportunity for attainment of personal ideals and objectives.

All the student's opinions on the suggested topics were analyzed. The opinions on the first topic were further divided into two topics in the analysis. Further, a comparison of the opinions of girls and boys was made; and finally, the subject fields and grade levels which the students designated as their prefer-

ences in teaching were tabulated.

Summary of findings. Of the 138 students, one hundred and ten or 79.71 per cent, thought that teachers' salaries were adequate for daily needs at the present time or would be in the near future. Only 2.17 per cent of the total number thought teacher salaries inadequate to meet daily needs. The opinions of 18.12 per cent could not be determined from the essays.

Of the 138 students, ninety-three, or 67.39 per cent, expected either a high or moderate degree of security of position; only 1.54 per cent of the total expected a low degree of security. Thirty-six, or 26.09 per cent of the total number of students did not give opinions definite enough for analysis.

Of the 138 students, seventy-nine, or 57.25 per cent, held the teaching profession in average or high social prestige. Seven students, or 5.07 per cent, thought teacher prestige low but expected improvement. Eleven, or 7.97 per cent, of the students thought that social prestige was dependent upon the individual teacher. No student held the teaching profession as low in social prestige. Forty-one, or 29.71 per cent, of the students failed to express an opinion on this point.

Of the 138 students, one hundred and twenty-four, or 89.85 per cent, looked forward to moderately great or exceptionally great opportunity for service as teachers. No student held the profession as low in opportunity for service, but fourteen students, or 10.15 per cent, of the total gave no opinion on this point.

Of the 138 students, one hundred and twenty-one, or 87.68 per cent, thought that the teaching profession offered moderately good or exceptionally good opportunity for attainment of personal ideals and objectives.

Watson, Charles L. *A Comparative Analysis of the Cost of Education for the Year Before and the Year After World War II.* August, 1947. 28 pp. (No. ——).

Problem. It is the purpose of the author in this study to make a complete analysis of the cost of education of one local system for the year before World War II (1941) and the year after the War (1946) and make a comparison of these findings in order to determine: first, the cost of education for each year; second, the proportionate relationship of each item of income and expenditure to the total for each year; third, the increases or decreases of each item over the five-year period; and fourth, the cost per pupil for each year, and the contributing factors to the increase in cost per pupil during this period.

Procedure. The Covington, Ohio, Exempted Village School system has been selected for the purpose of this study. All data were taken from the financial records of the board of education and the attendince records from the offices of superintendent and principal.

Yearly totals of all items of income and expense were computed and comparisons made of each item for the two years (1941 and 1946). Increases or decreases and the percentage of each increase or decrease of each item of income and expense were then recorded. The proportion of each item to the total income and expenditure for each year was then figured, and tables were prepared showing these relationships. The income per pupil and the per-pupil cost were then computed on the basis of the average daily attendance, as this is the method used for distribution of funds to each school system under the state foundation program.

Findings. From the analysis of the cost of education and of the income for the years 1941 and 1946, it has been found that the amount of income has increased 19.27 per cent while the cost of education has increased 29.59 per cent over the five-year period, representing an excessive increase of 10.32 per cent of expenditures over income for the period.

Per-pupil income has increased from $121.78 in 1941 to $150.05 in 1946—an increase of 23.32 per cent. Per-pupil cost has increased from $121.12 in 1941 to $162.14 in 1946—an increase of 33.87 per cent.

Average daily attendance decreased from 95.09 per cent in 1941 to 91.92 per cent in 1946—a factor that contributed materially to the increased per-pupil cost of education.

Personal service, the largest item of expense, increased from $47,673.62 to $65,721.41 or 37.8 per cent over the five-year period. Supplies, the second largest item of expenditure, increased from $10,696.59 to $20,423.31 or 90.9 per cent over the same period.

The other two major types of expenditure, Debt Service and Repairs and Replacements decreased 14.3 per cent and 11.9, respectively.

Brost, Sister M. Josepha. *A Study of Some Factors Influencing Likes and Dislikes of Students in Secondary-School Mathematics.* September, 1945. 81 pp. (No. 522).

Problem. It was the purpose of this study (1) to determine the likes and dislikes of students in secondary-school mathematics; (2) to inquire into the relations of students' preferences for various features of the subjects, the judgment of teachers' rankings, and the estimated students' rankings; and (3) to observe the types of errors made by a large percentage of these students in solving the same sets of exercises for which they expressed their preference.

Method. The casual-comparative method of research was used in the study. An "evaluation-test" was constructed in each of the three subjects: first-year algebra, plane geometry, and advanced algebra. A manual of directions to accompany each form was prepared for the teacher's use in administering the "evaluation-test" at the first period. These forms were administered to 348 students in first-year algebra; to 225, in geometry; and to 100, in advanced algebra classes at two

different class periods. An interval of four weeks elapsed between the first and the second of these periods. During the first period the students stated their preferences for the subjects in general and for various features in the subject matter; at the second, they stated their preferences for the subjects in general and solved the exercises. Results of these "evaluation-tests" were tabulated and disclosed in fifteen tables.

Findings. More than 75 per cent of the students enrolled in the secondary-school mathematics classes expressed a favorable attitude toward mathematics in general. Algebra was liked a trifle better than either mathematics or geometry.

Problem-solving exercises, even though the content involved activities of present-day youth, were highly disliked.

There was evidence that the students were handicapped when a literal instead of a numerical result was required.

Decimals were not attractive to the students, and the work was poorly performed. The dislike acquired for them in arithmetic seems to persist.

Fractional equations and items involving the use of fractions were rather highly preferred in spite of the fact that the students found them difficult and did the work poorly.

Lengthy simplifications were very much disliked. Teachers and students ranked these items as most difficult.

Little preference was shown for exercises requiring the use of quadratics. Only a small number of students attempted to solve these exercises, and many who did attempt them solved them incorrectly. Students probably feel a lack of mastery and of confidence in dealing with them.

Students in the advanced algebra classes lacked an understanding of mathematical concepts and principles.

Simple "if-then" relationship exercises and constructions were most liked in geometry; locus problems and geometric demonstrations, most disliked.

Confusion of thought was responsible for many errors; carelessness, for some. In geometry classes students had a meager understanding of proof.

Hawker, James F. *The Co-Ordination of All Phases of a Major Theatrical Production as an Extra-Curricular Activity.* June, 1946. 276 pp. (No. 529.)

Problem. This study was begun with the following purposes in mind: first, to set down in permanent, usable form the history of every phase of a single major production; second, to co-ordinate all the phases into the production of a major play; and, third, to teach the participants in the play through actual participation.

Method. This thesis was carried to a conclusion in the following manner. A play was chosen and cast. An effort was made to utilize as many war veterans as possible. After adequate rehearsals, the actors presented in a public performance the results of the co-ordinated activities of the director, the actors, the technical director, and the members of the various crews. The public performance was recorded by mechanical transcription. The script was revised from a reading version to an acting one, and a production book for the performance was prepared. An accurate record of the activities of every crew was compiled.

Conclusion. The effectiveness of the performance of the play can be judged at the present time either by those individuals who saw the play or by those people who desire to listen to the transcription. The recording, of course, does not present a stimulus as emotionally satisfying as did the actual production. The thesis itself is a composite picture in written form of everything which went to make up the giving of the show.

With respect to the veterans employed in the show, the specific studies brought forth the following conclusions. The veterans did not demand a different type of handling from that given other civilian participants, but required considerably less handling. When they were working, all their concentrated efforts were focused on the tasks at hand. The veterans were found to be more mature mentally. The depth of feeling shown in the interpretation and character development of the roles attested to their more realistic knowledge of the peoples of the world and to their enriched experiences. The veterans desired an artistic expression and an opportunity to follow enjoyable work. There was a strong indication that veterans are demanding a democratic theatre, with opportunities to produce, to direct, and to act in a free and experimental manner.

Nonte, Bernadine C. *The Effect of Ocular Therapy on the Improvement in Reading.* June, 1946. 38 pp. (No. 530.)

Problem. This experimental study was made to find out (1) how the practice of ocular therapy influences the reading of children who are visually handicapped, (2) how defective vision of children is influenced by ocular therapy, and (3) how reading achievement and visual efficiency of these groups compare with other visually handicapped children who were given only reading instruction.

Procedure. Classroom instruction was given the children of three groups of thirteen children each, four mornings per week for a period of ten weeks. The three groups were matched on visual acuity, reading grade level, intelligence, chronological age, mental age, mental-age-grade-expectancy, and deviation from mental-age-grade-expectancy.

Group I was given instruction in eye hygiene, principles of lighting, and training and practice in eye training exercises. Grop II received the same instruction with the addition of the same remedial reading

instruction as that given the children in Group III; and Grop III received remedial reading instruction only.

Results. Comparison of the groups of children at the end of the instructional period revealed the following findings:

1. The children who received ocular therapy made greater improvement in reading in relation to their mental ability than did the children who received remedial reading instruction only, for they gained .6 year while the latter gained only .3 year.

2. Those who received remedial reading and ocular therapy made as great improvement in reading as did the children who received ocular therapy only.

3. The absolute gain of .8 year in reading achievement was likewise the same for those who received ocular therapy and remedial reading. The absolute gain of these two groups was four times as great as the gain that would be expected of those children under an ordinary classroom situation. The absolute gain of the remedial reading group was .4 year.

4. The vision of the remedial reading group improved to a degree, for seven of the thirteen children made slight changes and had the normal 20/20 vision at the end of the instructional period. The vision of one child in this group became more defective; the vision of three remained the same; and that of two others improved but did not become normal.

5. In the ocular therapy group nine children had normal vision at the end of the instructional period; the vision of three did not change; and that of one changed from 20/10 to 20/15.

6. Although there were only eight in the remedial reading and ocular therapy group who had 20/20 vision at the end of the instructional period, greater changes toward better vision were shown in this group than in the other two groups, for one who had 20/50 vision at the beginning had 20/20 vioion at the end of the instructional period. The vision of four remained the same; and the vision of one improved but did not become normal.

From The Research Dept.

Study of Extracurricular Activities at ISTC

Charles Hardaway
Acting Director of Research
I S T C

There has been and continues to be considerable discussion and controversy concerning extracurricular activities of college students. With no thought of arriving at any definite conclusions regarding this problem, a survey was made of the extent of participation in extracurricular activities by students enrolled in Indiana State Teachers College during the Winter Term, 1946. All veterans were excluded from the survey in as much as the majority had been out of school for two or three years and thus would not present a true picture. Also all students over the age of twenty-three years were arbitrarily excluded from the study. A total of 639 students are therefore included in the survey.

The study was made with the intentions of determining the extent students are engaged in extracurricular activities, clubs, sororieties or fraternities, and other organizations, and if possible to determine whether or not there was any correlation between participation in extracurricular activities and scholarship achievement.

The first question that arises is: What are the opportunities available on the campus to provide for participation by the students in the extracurricular activities? The answer to this question is found in the following table:

TABLE I

Sororities and fraternities	12
Honorary organizations	15
Clubs	24
Publications	6
Athletics	
Debate	
Sycamore Theatre	
Radio	

It is immediately noticed that there is a wide and varied selection and that excellent opportunities are available to all students for participation in extracurricular activities at the college.

Table II shows the extent of participation of students in extracurricular activities.

The above data reveal that there is wide participation in extracurricular activities by a majority of the students. Approxmately 20% of the students were engaged in no extracurricular activity whatsoever, but of this number 93 or 71.5% were freshmen. It was also found that 22% of the inactives were engaged in employment for compensation. It is probable that the unparticipating freshmen will enter into activities as he progresses in school and his major interests are discovered.

The second part of the study, as previously stated, was to see if there were any definite relation-

TABLE II

			Per Cent
Number of students in the survey			639	
Number of students participating in no activities			130	20.34
		% of class	% of "Non-actives"	
Freshmen	93	33.4	71.5	
Sophomores	19	11.5	14.6	
Juniors	15	12.7	11.5	
Seniors	3	3.5	2.3	
Number of students participating in one or more activities			509	79.66
		% of class	% of "Non-actives"	
Freshmen		66.6	36.4	
Sophomores		88.5	26.9	
Juniors		87.3	20.2	
Seniors		96.5	16.5	
Number of students in fraternities or sororities			393	61.50
Number of students in fraternity or sorority only			132	20.66
Number of students in clubs or other activity, but not in a fraternity or sorority			127	19.87
Number of students in only one organization, other than fraternity or sorority			72	11.27
Number of students in one or more honor societies			88	13.77
Number of students in two organizations			122	19.09
Number of students in three organizations			78	12.22
Number of students in four organizations			40	6.26
Number of students in five organizations			24	3.76
Number of students in six or more organizations			10	1.56
Number holding one office in organizations			78	12.22
Number holding two offices in organizations			21	3.29
Number holding three or more offices in organizations			4	.63

ships between participation in extracurricular activities and scholarship achievement. It was soon discovered that the two proups compared were not equivalent. The active group consisted largely of upper classmen, while the non-active group was composed chiefly of underclassmen. However, the comparison was made, and though the results are inconclusive, they are of some degree of interest.

The active group consisted of all students, male and female, of the original 639 in the survey who participated in 4 or more extracurricular activities or who participated in three extracurricular activities and who also worked for compensation. The non-active group consisted of all students who participated in no activities whatsoever, and who were not working during the school term.

First an analysis was made of the curricula studied by the two groups during the Winter Term, 1946. This is shown in the following table:

TABLE III

Non-Actives

	Per Cent
Social Studies	15.01
English	14.48
Commerce	12.60
Science	11.53
Music	10.99
Speech	6.70
Education	6.43
Art	5.36
Ind. Arts	4.83
Mathematics	4.02
Home Ec.	3.75
Phys. Ed.	2.14
Teaching	1.34
For. Lang.	.80

Actives

	Per Cent
Commerce	12.50
English	12.03
Science	11.32
Music	10.61
Speech	10.26
Education	8.96
Teaching	6.13
Social Studies	5.66
Art	5.47
Home Ec.	5.18
For. Lang.	3.77
Mathematics	3.30
Phys. Ed.	2.95
Lib. Sci.	1.42
Ind. Arts	.71

Essentially, the curricula of the two groups are the same. Social studies ranks high on the Non-Actives curriculum because that group is largely freshmen who are required to take Social Studies 160, 161, and 162, during their first year. Education and teaching courses rank higher on the Actives' curriculum than on the Non-Actives' curriculum, in as much as the former group is composed largely of upper-classmen, and they receive most training in education and teaching in their junior and senior years.

Table IV gives a summary of the comparison of the two groups:

It is seen that the Active group, with a curriculum similar to the Non-Actives' curriculum, but of a higher class level, carried a heavier academic load than the Non-Actives, but made a considerably higher achievement in scholarship. It is possible however, that the active group might have made even higher achievement in scholarship had they withheld from participation in extracurricular activities.

Group	*No.*		*Median Age*	*Median Psychol Percentile*	*Median Academic Load*	*Median Index*
Actives	109	(Sr. 39; Jr. 34; So. 28; Fr. 8)	19.9 yr	61.36	15.6 hrs	69.1
Non-Actives	102	(Sr. 4; Jr. 13; So. 17; Fr. 68)	19.1 yr	47.45	14.6 hrs	58.9

. . Alumni News . .

Indiana State Alumnus Adopts a Dynamic Educational Program

Mark Schinnerer, '20, Superintendent of Schools, Cleveland, Ohio, recently announced appointment of an administrative advisory council to provide teacher groups with a voice in running the Cleveland schools. This announcement was favorably received by the teachers. The Council is to be composed of the president of each of the two teachers' organizations in Cleveland, plus two additional members named by the two presidents, an elementary and a secondary school principal, and one supervisor. In creating this council, Mr. Schinnerer stated that he wants to reduce the distance between his office and the classrooms. Mr. Schinnerer also indicated that he has hopes for extending the educational program in Cleveland. This would include: a longer school year, from the present 38 weeks to 44 or 48; nursery schools; the junior college; and additional community use of school facilities.

Indiana State alumni planning to attend the A.A.S.A. Convention in Atlantic City next February will have the opportunity of hearing Mr. Schinnerer speak at the I.S.T.C. Alumni Luncheon, 12 noon, February 23, at the Ambassador Hotel.

Building Social Qualities Needed in High School Students for Our Times

A very interesting and effective device for recognizing those students and faculty members, who, in their school activities reflect the finest social qualities needed in building a stronger democratic society, was observed recently in Bosse High School, Evansville, Indiana. Principal Carl Eifler, a student at State in the early twenties, has organized an Orchid Club. Charter members were selected by Mr. Eifler as he decided a member of his school merited recognition. As the membership grew, the power of selecting new members was delegated to the club members. The principal retained the veto power, but has never felt the need for exercising this power. A new member is notified of his selection by a personal letter written by Mr. Eifler explaining in full the reasons for the selection. This letter is written on stationery attractively tinted with an orchid. A placard, bearing the names of all the members of the club, hangs in a conspicuous place in the outer office. The fine influence of this innovation at Bosse results from the fact that the standards for acceptance into the club are very high and that the club members have fulfilled their obligations.

Orchids To—

Bernard H. Shockel, '09, received his Ph.D. from the University of Chicago in August. Mr. Schockel's progress will be of great interest to the many students he taught as a member of the science department at State. At present, he is serving as lecturer in geography at Washington University, St. Louis, Missouri.

Robert Elder, '36, son of our Registrar, Mr. Harry Elder, recently received his Ph.D. from the University of Chicago. Robert is serving as assistant professor in political science at Colgate University. (He married Gene Wann, daughter of Dr. H. V. Wann, and they now have a son.)

C. F. Barr, '20, was appointed this fall to the position of Head of the Department of Mathematics at the University of Wyoming at Laramie.

Walter D. Kline, president of class of '44, received his M.A. in the department of Spanish and Portuguese at the University of Wisconsin in August. Walter is now an instructor of Romance Languages at Emory University in Atlanta, Georgia.

Earl Koile, president of class of '39, received his Master of Arts Degree at Harvard University last summer and has been appointed Director of Student Personnel and Guidance at East Texas State Teachers College, Commerce, Tex.

Harold VanCleve, '33, has been appointed Assistant Director of the Evening Division and Summer School at Butler University.

Russell Sigler, '17, has been promoted to the position of vice-principal at Shortridge High School, Indianapolis, Indiana.

Robert Newton, '34, is serving as Assistant Professor at Butler University in the College of Business Administration, as well as director of the book store.

Blanche Warren McCluer, '28, was recently appointed Assistant Professor in the Department of Psychology at Pennsylvania State College.

Harry Barrick, '33, was appointed as Assistant Professor in the Industrial Arts Department at Indiana State.

In Service Training Program

A very constructive program of in-training was observed at Howe High School, Indianapolis, Indiana. The program is being directed by C. R. Clayton, '11, vice-principal and former faculty member during summer sessions at Indiana State. Howe High School is planning to adopt the lengthened period for the school year 1948-49. To make sure that the faculty functions efficiently under this plan, the faculty has been divided into groups for the purpose of studying every aspect of teaching under the lengthened period. An extensive bibliography has been prepared, and dates have been set on which the groups will report on their findings. This program should enable Howe High School to institute the program with the maximum of efficiency.